EXHIBIT 4

UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS SAN ANTONIO DIVISION

WAVE NEUROSCIENCE, INC. a Delaware Corporation,

Plaintiff.

VS.

BRAIN FREQUENCY LLC, a Texas Limited Liability Company

Defendant.

Case No. 5:23-CV-00626-XR

Honorable: Xavier Rodriguez

DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS

Plaintiff Wave Neuroscience, Inc. provides the following Disclosure of Asserted Claims and Infringement Contentions to Defendant Brain Frequency LLC ("Brain Frequency" or "Defendant").

I. ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS

Plaintiff's contentions are based on, in part, representative publicly available information describing Defendant's products and/or treatment. These contentions are preliminary because discovery is ongoing, Defendant has yet to produce any documents or information related to its products and/or treatment, and claim construction and expert discovery have not begun in this case. Plaintiff expressly reserves the right to supplement, modify, and/or amend its infringement contentions under the Federal Rules of Civil Procedure based on further information obtained during the discovery process, claim construction, and/or further analysis.

A. Assertion of Infringed Claims

Plaintiff asserts infringement of:

- i. Claims 1 and 9 of U.S. Patent 8,926,490 ("the '490 Patent") by Defendant;
- ii. Claims 1 and 3-7 of U.S. Patent No. 10,029,111 ("the '111 Patent") by Defendant;
- iii. Claims 1-4, 9-10, 12, and 20 of U.S. Patent 8,465,408 ("the '408 Patent") by Defendant; and
- iv. Claims 1-4, 8, 9, and 11 of U.S. Patent 8,870,737 ("the '737 Patent") by Defendant.

Together, these patents and claims are referred to as the Asserted Patents and Asserted Claims, respectively. Defendant is engaged in direct and indirect infringement of the Asserted Claims as set forth herein and in the accompanying claim charts and operative pleadings.

B. Claim Charts

The claim charts attached as Exhibits A, B, C, and D demonstrate that each and every element of Asserted Claims is found in disclosures made on Defendant's website and in public information and statements originating with the Defendant.

The attached charts include exemplary citations to documentation describing Defendant's products and/or treatment.

C. Identification of Accused Products/Instrumentalities

Based on the information currently available to Wave, Wave asserts

Defendant has been and is directly infringing under 35 U.S.C. § 271, literally or
under the doctrine of equivalents, at least Claims 1 and 9 of the '490 Patent and
Claims 12 and 20 of the '408 Patent by making, using, manufacturing, importing,
offering for sale, and/or selling the MagVenture TMS device featured and
described on the Brain Frequency website (brainfrequency.ai), as modified by
Brain Frequency.

Furthermore, Wave asserts that Defendant has been and is indirectly

infringing at least Claims 1 and 9 of the '490 Patent and Claims 12 and 20 of the '408 Patent by intentionally promoting, aiding, and instructing customers to purchase and use the MagVenture TMS device featured and described on the Brain Frequency website (<u>brainfrequency.ai</u>), as modified by Brain Frequency.

According to the Brain Frequency website, "TMS treatment has traditionally been used to manage depression. However, TMS therapy does not use qEEG to tailor treatment plans to individual needs. Brain FrequencyTM is an individualized approach to TMS and is more effective as each patient's brain has a unique frequency needed for optimal performance. Brain FrequencyTM has dramatically improved the treatment of patients with major depressive disorders, post-traumatic stress, TBI, anxiety, addictive disorders, ADHD, sleep disorders, and OCD." (https://brainfrequency.ai/overview).

Wave alleges that the method accused of indirectly infringing at least the Asserted Claims of the '111 Patent, Claims 1-4, 9, and 10 of the '408 Patent, and the Asserted Claims of the '737 Patent is the Brain Frequency AI method featured and described on the Brain Frequency website (see, e.g., https://brainfrequency.ai/overview), that employs the modified MagVenture TMS device.

According to the Brain Frequency website, "The Brain Frequency™ AI system is an innovative therapeutic approach to improving brain health and wellness. We use proprietary science-based technology to promote optimal brain functioning across mental, emotional, physical and social domains. Our diagnostic technology and individualized treatment protocols help decrease or eliminate trauma-related symptoms and various mental health disorders." (https://brainfrequency.ai/overview).

This identification of accused instrumentalities and methods is preliminary and is made without the benefit of receiving discovery in this case. To the extent Defendant is making use of other conventional TMS devices (other than the MagVenture TMS device) that has been modified, Plaintiff believes that those devices, and methods employing those devices, are also likely to infringe the Asserted Claims. Plaintiff reserves the right to supplement this identification of accused instrumentalities as new information is discovered.

D. Literal and Equivalent Infringement

As set forth in the attached claim charts, Plaintiff currently contends that each of the limitations of the Asserted Claims is met literally, and, to the extent a limitation is not met literally, it is met under the doctrine of equivalents.

E. Indirect Infringement

Discovery has not yet begun, and Plaintiff therefore has not received information from the Defendant regarding the identity and details of the customers to whom Defendant provides infringing devices and services. Nevertheless, Plaintiff alleges that the Defendant is engaged in induced and contributory infringement of the Asserted Claims of the Asserted Patents as set forth below.

1. U.S. Patent 8,926,490

Defendant Brain Frequency has been and continues to induce its customers to directly infringe at least Claims 1 and 9 of the '490 Patent by intentionally promoting, aiding, and instructing customers to purchase and use the products and/or treatments that incorporate the technology claimed in the '490 Patent. Defendant knew or should have known that the use of the products and/or treatments that incorporate the technology claimed in the '490 Patent by its customers directly infringes at least Claims 1 and 9 of the '490 Patent.

2. U.S. Patent 10,029,111

Defendant Brain Frequency has been and continues to induce its customers to directly infringe at least Claims 1 and 3-7 of the '111 Patent by intentionally promoting, aiding, and instructing customers to purchase and use the products

and/or treatments that incorporate the technology claimed in the '111 Patent. Defendant Brain Frequency knew or should have known that the use of the products and/or treatments that incorporate the technology claimed in the '111 Patent by its customers directly infringes at least Claims 1 and 3-7 of the '111 Patent.

3. U.S. Patent 8,465,408

Defendant Brain Frequency has been and continues to induce its customers to directly infringe at least Claims 1-4, 9-10, 12, and 20 of the '408 Patent by intentionally promoting, aiding, and instructing customers to purchase and use the products and/or treatments that incorporate the technology claimed in the '408 Patent. Defendant Brain Frequency knew or should have known that the use of the products and/or treatments that incorporate the technology claimed in the '408 Patent by its clients directly infringes at least Claims 1-4, 9-10, 12, and 20 of the '408 Patent.

4. U.S. Patent 8,870,737

Defendant Brain Frequency has been and continues to induce its customers to directly infringe at least Claims 1-4, 8, 9, and 11 of the '737 Patent by intentionally promoting, aiding, and instructing customers to purchase and use the products and/or treatments that incorporate the technology claimed in the '737 Patent. Defendant Brain Frequency knew or should have known that the use of the products and/or treatments that incorporate the technology claimed in the '737 Patent by its customers directly infringes at least Claim 1-4, 8, 9, and 11 of the '737 Patent.

II. PLAINTIFF'S DAMAGES MODEL

Wave is entitled to damages to compensate it for monetary losses resulting from Defendant's infringing activities. Wave seeks lost profit damages based on Defendant's sales of infringing products and Wave's profit margins. In the alternative, Wave seeks a reasonable royalty based upon one or more of the factors outlined in *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970). Wave also seeks an award of increased damages pursuant to 35 U.S.C. § 284 as well as Wave's costs, attorneys' fees, expert witness fees and such other and further relief as may be appropriate.

III. DOCUMENT PRODUCTION ACCOMPANYING DISCLOSURE

Plaintiff is producing herewith the file histories for each asserted patent, labeled WAVE0000001 – WAVE0004318, in accordance with the parties' Agreed Scheduling Recommendations.

DATED: December 15, 2023 Respectfully submitted,

/s/ J. Rick Taché

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Attorneys for Plaintiff WAVE NEUROSCIENCE, INC.

On the date set forth below, I served the foregoing document described as:

DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS

| on all other parties and/or their attorney(s) of record | I to this action by \square faxing and/or |
|--|---|
| □ placing a true copy thereof in a sealed envelope | as follows: |
| John D. Saba, Jr. Jack Simms, Jr. Matthew K. Gates WITTLIFF CUTTER PLLC 510 Baylor Street Austin, TX 78701 john@wittliffcutter.com jack@wittliffcutter.com matt@wittliffcutter.com | |
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| Attorneys for Defendant BRAIN FREQUENCY | |
| BY EMAIL On December 15, 2023, I cause sent in electronic PDF format as an attachment to a such document(s) is/are to be served at the email adperson(s) or as obtained from an internet website(s) receive an email response upon sending such email delivered. | n email addressed to the person(s) on whom dress(es) shown above, as last given by that relating to such person(s), and I did not |
| ☑ I declare that I am employed in the office of direction the service was made. Executed on December 1. | |
| | /s/ Catherine Cruz |
| BN 79938065v3 | (Signature) |
| 7 | |
| DI AINTHEE!C INHTIAL INEDINICEMENT | |

EXHIBIT A

US 8,926,490

Infringing Activity

1. A system for treating depression in a subject comprising:

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant makes, provides, sells, and induces the infringing use by customers of a system for treating depression in a subject according to claim 1.¹

BRAIN HEALTH & WELLNESS

MENTAL HEALTH DISORDERS

- Trauma & Stressor-Related
- Impulse Control & Conduct
- Schizophrenia & Psychotic
- Obsessive-Compulsive
- Substance & Addictive
- Neurodevelopmental
- Somatic Symptom
- Feeding & Eating
- Neurocognitive
- <u>Dissociative</u>
- Sleep-Wake
- Personality
- <u>Depressive</u>
- Anxiety
- <u>Bipolar</u>
- ADHD
- PTSD

https://brainfrequency.ai/overview

¹ The Brain Frequency website lists "locations" in four states: Gladden Longevity in Texas (https://www.gladdenlongevity.com/, Live In Alignment in California (https://www.liveinalignment.org/), BioMed Scottsdale in Arizona (https://thebiomedcenter.com/), and Energy4Life Centers in Utah (https://energy4lifecenters.com/).

| Patient: "Jason" Valid Psychometric Assessments Subjective | | | | | |
|---|------------|------------|------------|--|--|
| Assessments | 02/09/2022 | 02/22/2022 | 03/09/2022 | | |
| Executive Functioning Scale | 43 | 31 | 11 | | |
| Anxiety | 20 | 14 | 6 | | |
| Depression | 38 | 38 | 12 | | |
| Brain Body Connection | 29 | 15 | 8 | | |
| Sleep | 17 | 6 | 0 | | |
| Post Trauma | 58 | 22 | 6 | | |
| Concussion Symptoms | 65 | 47 | 33 | | |
| Cravings | 4 | 0 | 0 | | |
| Obsessive Thoughts & Behaviors | 37 | 23 | 11 | | |
| * Higher number represents more severe symptoms SEVERE MILD NORMAL | | | | | |

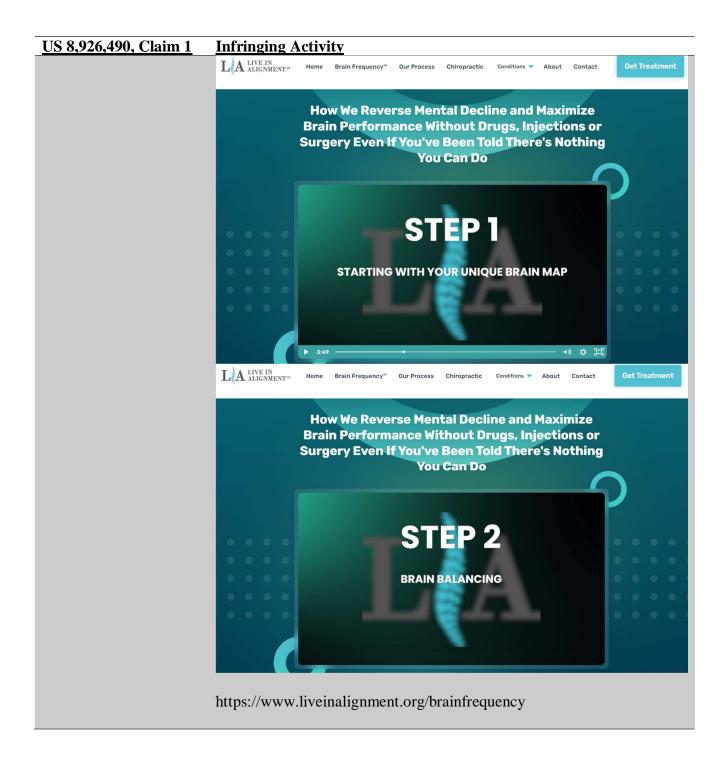
https://brainfrequency.ai/overview

How do I know if I can integrate Brain Frequency™ into my clinic?

Since Brain Frequency™ is able to treat a wide array of mental health, neurological disorders, and cognitive functioning, we've separated our abilities into two distinct practices. One is for mental health and medical practitioners to treat DSM-5 diagnosable issues like depression, bipolar disorder, concussions, and the like. The other is for functional medicine and wellness, used to treat things like general sleep issues, mental fog, trouble with short term memory, tinnitus, etc. You can see more about this distinction on the Affiliate Program page.

https://brainfrequency.ai/provider-faqs-1

| Example Therapies + Strates | gic Interventions: | |
|--|-----------------------------------|----------------------------------|
| Plasmapheresis | Sirtuin Activation | ⊘ EBOO |
| Plasmapheresis with Young Plasma | ▼ Targeted Custom Peptide Therapy | Cerebral Fit |
| ▼ Telomerase | Personalized Peptide Therapy | Stem Cells |
| Activated PRP/ VSELS | MAH | Exosomes |
| mTOR/ AMPK Balancing | Ozone with Laser | Neuro Muscular Training |
| Senolytics/ Senomorphics | Brain Frequency | US Guided Joint Injections |
| | | Customized Supplement Bundles |
| // 4 4 4 4 | , | |



Infringing Activity

OUR TECHNOLOGY

We utilize a variety of technologies to support and regenerate the brain. Brain Frequency (iTMS), EEG's, neurofeedback, audio visual entrainment, and neurocogntive testing to name a few. These technologies help us to better understand the brain and develop personalized treatment plans for you.

https://energy4lifecenters.com/brain-health/

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

a magnetic field generator adapted to apply a magnetic field to a head of the subject, wherein the magnetic field generator comprises: Information appearing on Brain Frequency's website, and the TMS manufacturer website/product sheets confirm a magnetic field generator adapted to apply a magnetic field to a head of the subject.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

https://brainfrequency.ai/patient-faqs

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

https://brainfrequency.ai/patient-faqs

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability.

Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

https://brainfrequency.ai/affiliate-program

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

https://brainfrequency.ai/provider-faqs-1



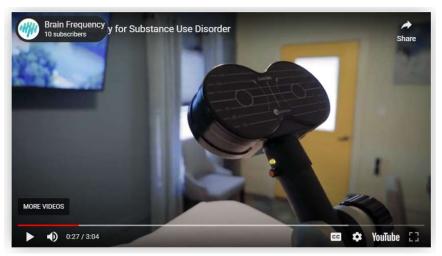
https://brainfrequency.ai/overview



MagPro X100 Product Information Sheet, 03/23/2023.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

a) a non-transitory computer readable medium containing a subject data value comprising i) a first intrinsic frequency of a brain of the subject within a specified EEG band, ii) a Q-factor of the first intrinsic frequency, Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms a non-transitory computer readable medium containing a subject data value comprising a first intrinsic frequency of a brain of the subject within a specified EEG band.

iii) a coherence value of a second intrinsic frequency and a third intrinsic frequency, wherein the second and third intrinsic frequencies are from two different sites in the brain of the subject within the specified EEG band, or iv) an EEG phase between two sites in the brain of the subject of a specified EEG frequency, wherein the two sites are different; and

Infringing Activity

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1



https://brainfrequency.ai/why-are-we-different%3F-1

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same

Infringing Activity

result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

b) a processor configured to control the magnetic field based on said subject data value, wherein the magnetic field is configured to i) move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field, ii) move the O-factor

ii) move the Q-factor of the first intrinsic frequency in a preselected direction, up or down, within the specified EEG band using the magnetic field,

iii) move the coherence value by applying the magnetic field and a second magnetic field that is asynchronous with the magnetic field close to the head of the subject and reducing the coherence value, or by applying the magnetic field and the second magnetic field that is synchronized with the magnetic field close to the head of the subject and raising the coherence value, or

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms a processor configured to control the magnetic field based on said subject data value, wherein the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1

iv) move the EEG phase of the specified EEG frequency, wherein the magnetic field comprises a first magnetic field that is in-phase with the second magnetic field or a first magnetic field that is out of phase with the second magnetic field; and

Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

Wide awake. This is generally the mental state most people are in during the day and
most of their waking lives. Usually, this state in itself is uneventful, but don't
underestimate its importance. Many people lack sufficient beta activity, which can
cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR
production (a sub-range of beta at 12-15hz) which may be related to insomnia.
 Stimulating beta activity can improve emotional stability, energy levels, attentiveness
and concentration.

ALPHA (8 hz - 12 hz):

Awake but relaxed and not processing much information. When you get up in the
morning and just before sleep, you are naturally in this state. When you close your
eyes your brain automatically starts producing more alpha waves. Many studies
monitoring the EEG activity of experienced meditators have revealed strong increases
in alpha activity. Alpha activity has also been connected to the ability to recall
memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

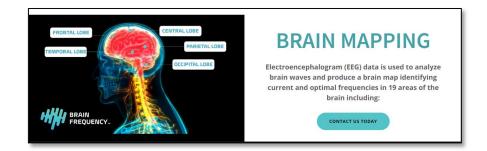
You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs



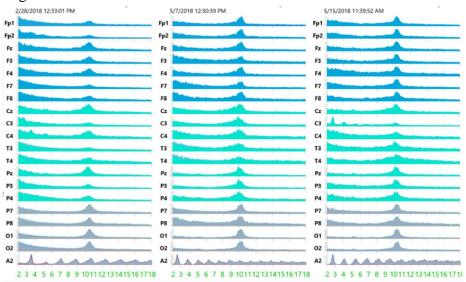
https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

The Brain Frequency Center website confirms that the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.



https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd

In a podcast, Brain Frequency founder and member Shannon Malish further confirms that the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 16:36-16:45, "if someone had very high anxiety, you would see those neurons really dialed up outside of the alpha state"; 20:47-20:57, "it [your brain] knows that that exact magnetic frequency and so it will grab onto it and it holds"; and 21:55-22:05, "we're going to take the number of where it [your brain] operates well and then we're going to use the magnet and set the magnet in areas of where your brain doesn't operate well") (available at https://gladdenlongevitypodcast.com/episodes, and https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fixyour-brain-once-and-for-all and https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34f adb30054a80)

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

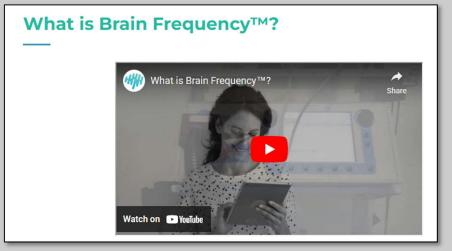
https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

wherein the magnetic field increases the blood flow of a cortex of the brain or decreases the blood flow of a lower region of the brain. Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms a magnetic field increases blood flow of a cortex of the brain or decreases the blood flow of a lower region of the brain.



https://brainfrequency.ai/overview

Case 5:23-cv-00626-XR

Treatment Overview



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

In a podcast, Brain Frequency founder and member Shannon Malish further confirms a magnetic field increases blood flow of a cortex of the brain or decreases the blood flow of a lower region of the brain.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 21:22 – 22:37 "so the EEG tells us how your brain functions well...and so we use that actual number of how your brain operates in the treatment plan to deliver magnetic stimulation"; 22:10-22:23"your brain functions, remember, back to front so that's the way we are treating you...we are going to treat you from back to front and your neurons start to pick up that pattern because it recognizes it") (available at

https://gladdenlongevitypodcast.com/episodes, and https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fix-your-brain-once-and-for-all and https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34fadb30054a80)

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

Infringing Activity

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 8,926,490, Claim 9

Infringing Activity

The system of claim 1, further comprising logic configured to calculate the subject data value from EEG data collected from the subject.

Defendant makes, provides, sells, and induces the infringing use by customers of a system for treating depression in a subject according to claim 9.

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms logic configured to calculate the subject data value from EEG data collected from the subject.

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

Wide awake. This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

Awake but relaxed and not processing much information. When you get up in the
morning and just before sleep, you are naturally in this state. When you close your
eyes your brain automatically starts producing more alpha waves. Many studies
monitoring the EEG activity of experienced meditators have revealed strong increases
in alpha activity. Alpha activity has also been connected to the ability to recall
memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

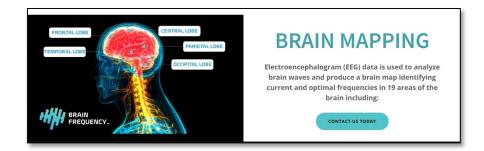
You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs



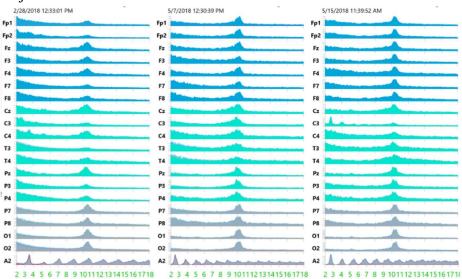
https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

The Brain Frequency Center website confirms logic configured to calculate the subject data value from EEG data collected from the subject.



https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

EXHIBIT B

US 10,029,111

US 10,029,111, Claim 1

Infringing Activity

A method of improving a physiological condition or a neuropsychiatric condition of a mammal which comprises

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai), on the TMS manufacturer's website and product sheets, and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method of improving a physiological condition or a neuropsychiatric condition according to claim 1.²

BRAIN HEALTH & WELLNESS

MENTAL HEALTH DISORDERS

- Trauma & Stressor-Related
- Impulse Control & Conduct
- Schizophrenia & Psychotic
- Obsessive-Compulsive
- Substance & Addictive
- Neurodevelopmental
- Somatic Symptom
- Feeding & Eating
- Neurocognitive
- Dissociative
- Sleep-Wake
- Personality
- **Depressive**
- Anxiety
- Bipolar
- ADHD
- PTSD

https://brainfrequency.ai/overview

² The Brain Frequency website lists "locations" in four states: Gladden Longevity in Texas (https://www.gladdenlongevity.com/, Live In Alignment in California (https://www.liveinalignment.org/), BioMed Scottsdale in Arizona (https://thebiomedcenter.com/), and Energy4Life Centers in Utah (https://energy4lifecenters.com/).

PREDICTIVE DIAGNOSTICS

Brain Frequency™ Al software's predictive and diagnostic analytics, assists healthcare professionals by improving diagnosis efficiency, treatment accuracy, and patient experience.

Our proprietary science-based technology and individualized treatment protocols, help to improve brain health and wellness by decreasing or eliminating symptoms of trauma related conditions and various mental health disorders. The Brain Frequency™ system promotes optimum brain unctioning across cognitive, sensory, social-emotional, behavioral, and motodomains



https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653

SUBSTANCE USE DISORDERS



Substance abuse affects the frontal cortex of the brain controlling judgement and impulsivity. Data analyzation has determined those who chronically relapse have little to no movement in this area. After Brain Frequency treatments, patients experienced functional improvement of the frontal cortex resulting in a 28% increase in continued abstinence.

https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653

| Patient: "Jason" Valid Psychometric Assessments Subjective | | | | | |
|--|--------------------|------------|------------|--|--|
| Assessments | 02/09/2022 | 02/22/2022 | 03/09/2022 | | |
| Executive Functioning Scale | 43 | 31 | 11 | | |
| Anxiety | 20 | 14 | 6 | | |
| Depression | 38 | 38 | 12 | | |
| Brain Body Connection | 29 | 15 | 8 | | |
| Sleep | 17 | 6 | 0 | | |
| Post Trauma | 58 | 22 | 6 | | |
| Concussion Symptoms | 65 | 47 | 33 | | |
| Cravings | 4 | 0 | 0 | | |
| Obsessive Thoughts & Behaviors | 37 | 23 | 11 | | |
| * Higher number represents more severe symptoms | | | | | |
| SEVERE | SEVERE MILD NORMAL | | | | |

https://brainfrequency.ai/overview

How do I know if I can integrate Brain Frequency™ into my clinic?

Since Brain Frequency™ is able to treat a wide array of mental health, neurological disorders, and cognitive functioning, we've separated our abilities into two distinct practices. One is for mental health and medical practitioners to treat DSM-5 diagnosable issues like depression, bipolar disorder, concussions, and the like. The other is for functional medicine and wellness, used to treat things like general sleep issues, mental fog, trouble with short term memory, tinnitus, etc. You can see more about this distinction on the Affiliate Program page.

https://brainfrequency.ai/provider-faqs-1

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

subjecting the mammal to repetitive transcranial magnetic stimulation (rTMS) Information appearing on Brain Frequency's website, on an affiliate's website using the Brain Frequency technology, and on the TMS manufacturer's website confirm that a human is subjected to rTMS.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

https://brainfrequency.ai/patient-fags

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

https://brainfrequency.ai/patient-faqs

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability.

Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

https://brainfrequency.ai/affiliate-program

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

https://brainfrequency.ai/provider-faqs-1



https://brainfrequency.ai/overview



MagPro X100 Product Information Sheet, 03/23/2023.

US 10,029,111, Claim 1 Infringing Activity



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page:

https://www.youtube.com/watch?v=ZT4CgJxgb5c.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page:

https://www.youtube.com/watch?v=ZT4CgJxgb5c.

US 10,029,111, Claim 1 Infringing Activity



MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

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US 10,029,111, Claim 1

1, Claim 1 Infringing Activity

at a frequency of a non-EEG biological metric, or an harmonic or sub-harmonic of said non-EEG biological metric, Information appearing on the Brain Frequency website confirms at a frequency of a non-EEG biological metric, or an harmonic or subharmonic of said non-EEG biological metric.

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability.

Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

https://brainfrequency.ai/affiliate-program



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

A patent application that names Shannon Malish, founder and member of Brain Frequency as an inventor (Appl. No.: 17/811,053; Pub. No. US 2022/0355125 A1; the "125 Publication") confirms at a frequency of a non-EEG biological metric, or an harmonic or sub-harmonic of said non-EEG biological metric.

US 10,029,111, Claim 1 Infringing Activity

"Specifically, a Target Frequency is an Alpha wave frequency at which a subject's brain should be operating optimally in maximum of the EEG channels when functioning normally. A Target Frequency may be about 7 Hz-13 Hz, about 8-12 Hz, about 9-11 Hz, or the like. Optionally, the Target Frequency for a subject may be determined by taking the average PSD values across all EEG channels and aligning this average with the nearest Heart Rate Frequency (as discussed below with respect to FIGS. 9A and 9B)." '125 Publication, paragraph [0036].

"As such the treatment protocols are determined to move the Homeostatic frequency 903 (and/or the Greatest Frequency of each channel) towards the Target Frequency 904. Optionally, a heart rate artifact (902) may be observed and discarded if the peak frequencies for all or substantially all of the channels are aligned with a heart rate peak. Such heart rate artifacts may be indicative of a strong heartrate that appears to be overtaking the EEG." '125 Publication, paragraph [0171].

"Similarly, in FIG. 9B two homeostatic frequencies 914 (about 8.5 Hz) and 916 (about 10.9) are observed which are between 8-12 Hz. As such, the Target Frequency is determined as the heart rate peak 916 (e.g., about 9.5 Hz) that lies between 914 and 916." '125 Publication, paragraph [0172].

"This new treatment protocol continues for two rounds of 10 treatments which may include adjustment in the frequency depending on the EEG and alignment of all leads with the heart rate (A2 lead). On this protocol, only one treatment occurs over 24 hours." '125 Publication, paragraph [0184].

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 10,029,111, Claim 1 Infringing Activity

wherein the mammal is a human.

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms human subjects.



https://brainfrequency.ai/overview

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

| <u>US 10,029,111, Claim 3</u> | Infringing Activity |
|-------------------------------|--|
| The method of claim 1 | The evidence appearing on Brain Frequency's website |
| wherein the rTMS | (brainfrequency.ai), on the TMS manufacturer's website and product |
| frequency is equal to, | sheets, and on customer websites regarding using the Brain Frequency |
| or a harmonic or sub- | technology confirms that Defendant induces the infringing use by |
| harmonic of, a non- | |

US 10,029,111, Claim 3

Infringing Activity

EEG biological metric that is closest to an intrinsic frequency in a desired EEG band. customers of a method of improving a physiological condition or a neuropsychiatric condition according to claim 3.

The '125 Publication confirms the rTMS frequency is equal to, or a harmonic or sub-harmonic of, a non-EEG biological metric that is closest to an intrinsic frequency in a desired EEG band.

"Specifically, a Target Frequency is an Alpha wave frequency at which a subject's brain should be operating optimally in maximum of the EEG channels when functioning normally. A Target Frequency may be about 7 Hz-13 Hz, about 8-12 Hz, about 9-11 Hz, or the like. Optionally, the Target Frequency for a subject may be determined by taking the average PSD values across all EEG channels and aligning this average with the nearest Heart Rate Frequency (as discussed below with respect to FIGS. 9A and 9B)." '125 Publication, paragraph [0036].

"This new treatment protocol continues for two rounds of 10 treatments which may include adjustment in the frequency depending on the EEG and alignment of all leads with the heart rate (A2 lead). On this protocol, only one treatment occurs over 24 hours." '125 Publication, paragraph [0184].

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 10,029,111, Claim 4

Infringing Activity

The method of claim 3 wherein the non-EEG biological metric is heart rate.

The evidence appearing on Brain Frequency's website (brainfrequency.ai), on the TMS manufacturer's website and product sheets, and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by

US 10,029,111, Claim 4 Infringing Activity

customers of a method of improving a physiological condition or a neuropsychiatric condition according to claim 4.

The '125 Publication confirms the non-EEG biological metric is heart rate.

"Specifically, a Target Frequency is an Alpha wave frequency at which a subject's brain should be operating optimally in maximum of the EEG channels when functioning normally. A Target Frequency may be about 7 Hz-13 Hz, about 8-12 Hz, about 9-11 Hz, or the like. Optionally, the Target Frequency for a subject may be determined by taking the average PSD values across all EEG channels and aligning this average with the nearest Heart Rate Frequency (as discussed below with respect to FIGS. 9A and 9B)." '125 Publication, paragraph [0036].

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 10,029,111, Claim 5 **Infringing Activity** The evidence appearing on Brain Frequency's website The method of claim 1 wherein the (brainfrequency.ai), on the TMS manufacturer's website and product sheets, and on customer websites regarding using the Brain Frequency physiological condition is concentration, sleep, technology confirms that Defendant induces the infringing use by alertness, memory, customers of a method of improving a physiological condition or a blood pressure, stress, neuropsychiatric condition according to claim 5. libido, speech, motor function, physical Information appearing on Brain Frequency's website confirms the performance, cognitive physiological condition is concentration, sleep, alertness, memory, blood function, intelligence, pressure, stress, libido, speech, motor function, physical performance, height or weight. cognitive function, intelligence, height or weight.

| US 10,029,111, Claim : | Infringing Activity |
|------------------------|----------------------------|
|------------------------|----------------------------|

| Patient: "Jason" Valid Psychometric Assessments Subjective | | | |
|---|------------|------------|------------|
| Assessments | 02/09/2022 | 02/22/2022 | 03/09/2022 |
| Executive Functioning Scale | 43 | 31 | 11 |
| Anxiety | 20 | 14 | 6 |
| Depression | 38 | 38 | 12 |
| Brain Body Connection | 29 | 15 | 8 |
| Sleep | 17 | 6 | 0 |
| Post Trauma | 58 | 22 | 6 |
| Concussion Symptoms | 65 | 47 | 33 |
| Cravings | 4 | 0 | 0 |
| Obsessive Thoughts & Behaviors | 37 | 23 | 11 |
| * Higher number represents more severe symptoms SEVERE MILD NORMAL | | | |

https://brainfrequency.ai/overview

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 10,029,111, Claim 6 Infringing Activity

The method of claim 1 wherein the neuropsychiatric condition is Autism Spectrum Disorder

The evidence appearing on Brain Frequency's website (brainfrequency.ai), on the TMS manufacturer's website and product sheets, and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by

US 10,029,111, Claim 6

Infringing Activity

(ASD), Alzheimer's disease, ADHD, schizophrenia, anxiety, depression, coma, Parkinson's disease, substance abuse, bipolar disorder, a sleep disorder, an eating disorder, tinnitus, traumatic brain injury, post traumatic stress syndrome, chronic pain or fibromyalgia.

customers of a method of improving a physiological condition or a neuropsychiatric condition according to claim 6.

Information appearing on Brain Frequency's website and customer websites confirms the neuropsychiatric condition is Autism Spectrum Disorder (ASD), Alzheimer's disease, ADHD, schizophrenia, anxiety, depression, coma, Parkinson's disease, substance abuse, bipolar disorder, a sleep disorder, an eating disorder, tinnitus, traumatic brain injury, post traumatic stress syndrome, chronic pain or fibromyalgia.

BRAIN HEALTH & WELLNESS MENTAL HEALTH DISORDERS • Trauma & Stressor-Related Impulse Control & Conduct • Schizophrenia & Psychotic • Obsessive-Compulsive • Substance & Addictive • Neurodevelopmental • Somatic Symptom · Feeding & Eating • Neurocognitive Dissociative Sleep-Wake Personality • **Depressive** Anxiety • Bipolar ADHD PTSD

https://brainfrequency.ai/overview

US 10,029,111, Claim 6 Infringing Activity



https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653

SUBSTANCE USE DISORDERS



Substance abuse affects the frontal cortex of the brain controlling judgement and impulsivity. Data analyzation has determined those who chronically relapse have little to no movement in this area. After Brain Frequency treatments, patients experienced functional improvement of the frontal cortex resulting in a 28% increase in continued abstinence.

 $\frac{https://brainfrequency.ai/why-are-we-different\%3F-1\#c8ee53a4-5885-4b67-9b4c-1f504d8f9653$

| Patient: "Jason" Valid Psychometric Assessments Subjective | | | |
|---|------------|------------|------------|
| Assessments | 02/09/2022 | 02/22/2022 | 03/09/2022 |
| Executive Functioning Scale | 43 | 31 | 11 |
| Anxiety | 20 | 14 | 6 |
| Depression | 38 | 38 | 12 |
| Brain Body Connection | 29 | 15 | 8 |
| Sleep | 17 | 6 | 0 |
| Post Trauma | 58 | 22 | 6 |
| Concussion Symptoms | 65 | 47 | 33 |
| Cravings | 4 | 0 | 0 |
| Obsessive Thoughts & Behaviors | 37 | 23 | 11 |
| * Higher number represents more severe symptoms SEVERE MILD NORMAL | | | |

US 10,029,111, Claim 6 Infringing Activity

https://brainfrequency.ai/overview

OUR TECHNOLOGY

We use a range of technologies to support our treatment approach to anxiety, including EEG (electroencephalogram) neurofeedback, qEEG (quantitative electroencephalogram) brain mapping, and Brain Freuqeuncy, iTMS (idividualized transcranial magnetic stimulation). These technologies allow us to measure brain activity and create customized treatment plans to improve brain function and reduce anxiety symptoms.

https://energy4lifecenters.com/brain-health/

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 10,029,111, Claim 7

Infringing Activity

The method of claim 3 wherein the intrinsic frequency is in the delta band (<4 Hz), the theta band (4-8 Hz), the alpha band (8-13 Hz), the beta band (13-

The evidence appearing on Brain Frequency's website (brainfrequency.ai), on the TMS manufacturer's website and product sheets, and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method of improving a physiological condition or a neuropsychiatric condition according to claim 7.

US 10,029,111, Claim 7

Infringing Activity

30 Hz), the gamma band (25-100 Hz), or the Mu band (8-13 Hz). Information appearing on Brain Frequency's website confirms the intrinsic frequency is in the delta band (<4 Hz), the theta band (4-8 Hz), the alpha band (8-13 Hz), the beta band (13-30 Hz), the gamma band (25-100 Hz), or the Mu band (8-13 Hz).

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

Wide awake. This is generally the mental state most people are in during the day and
most of their waking lives. Usually, this state in itself is uneventful, but don't
underestimate its importance. Many people lack sufficient beta activity, which can
cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR
production (a sub-range of beta at 12-15hz) which may be related to insomnia.
 Stimulating beta activity can improve emotional stability, energy levels, attentiveness
and concentration.

ALPHA (8 hz - 12 hz):

Awake but relaxed and not processing much information. When you get up in the
morning and just before sleep, you are naturally in this state. When you close your
eyes your brain automatically starts producing more alpha waves. Many studies
monitoring the EEG activity of experienced meditators have revealed strong increases
in alpha activity. Alpha activity has also been connected to the ability to recall
memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

US 10,029,111, Claim 7 Infringing Activity

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

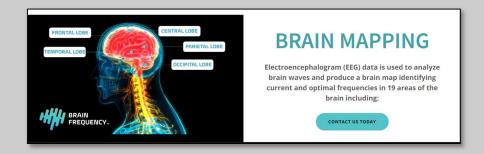
You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs



https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653

The '125 Publication confirms the intrinsic frequency is in the delta band (<4 Hz), the theta band (4-8 Hz), the alpha band (8-13 Hz), the beta band (13-30 Hz), the gamma band (25-100 Hz), or the Mu band (8-13 Hz).

US 10,029,111, Claim 7 Infringing Activity

"Specifically, a Target Frequency is an Alpha wave frequency at which a subject's brain should be operating optimally in maximum of the EEG channels when functioning normally. A Target Frequency may be about 7 Hz-13 Hz, about 8-12 Hz, about 9-11 Hz, or the like. Optionally, the Target Frequency for a subject may be determined by taking the average PSD values across all EEG channels and aligning this average with the nearest Heart Rate Frequency (as discussed below with respect to FIGS. 9A and 9B)." '125 Publication, paragraph [0036].

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

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EXHIBIT C

US 8,465,408

US 8,465,408 Claim 1

A method of treating Parkinson's disease, treating coma, treating post traumatic stress disorder (PTSD), treating amblyopia, and/or enhancing cognitive performance, in a subject, comprising:

Infringing Activity

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method for treating PTSD in a subject according to claim 1.³

BRAIN HEALTH & WELLNESS

MENTAL HEALTH DISORDERS

- Trauma & Stressor-Related
- Impulse Control & Conduct
- Schizophrenia & Psychotic
- Obsessive-Compulsive
- Substance & Addictive
- Neurodevelopmental
- Somatic Symptom
- Feeding & Eating
- Neurocognitive
- Dissociative
- Sleep-Wake
- Personality
- **Depressive**
- Anxiety
- Bipolar
- ADHD
- PTSD

https://brainfrequency.ai/overview

³ The Brain Frequency website lists "locations" in four states: Gladden Longevity in Texas (https://www.gladdenlongevity.com/, Live In Alignment in California (https://www.liveinalignment.org/), BioMed Scottsdale in Arizona (https://thebiomedcenter.com/), and Energy4Life Centers in Utah (https://energy4lifecenters.com/).

| Patient: "Jason" Valid Psychometric Assessments Subjective | | | |
|---|------------|------------|------------|
| Assessments | 02/09/2022 | 02/22/2022 | 03/09/2022 |
| Executive Functioning Scale | 43 | 31 | 11 |
| Anxiety | 20 | 14 | 6 |
| Depression | 38 | 38 | 12 |
| Brain Body Connection | 29 | 15 | 8 |
| Sleep | 17 | 6 | 0 |
| Post Trauma | 58 | 22 | 6 |
| Concussion Symptoms | 65 | 47 | 33 |
| Cravings | 4 | 0 | 0 |
| Obsessive Thoughts & Behaviors | 37 | 23 | 11 |
| * Higher number represents more severe symptoms SEVERE MILD NORMAL | | | |

https://brainfrequency.ai/overview

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

(a) adjusting a setting of a magnetic field such that the magnetic field is configured to do one or more of the following: Information appearing on Brain Frequency's website, and the TMS manufacturer website/product sheets confirm adjusting a setting of a magnetic field.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

https://brainfrequency.ai/patient-faqs

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers , spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

https://brainfrequency.ai/patient-faqs

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability.

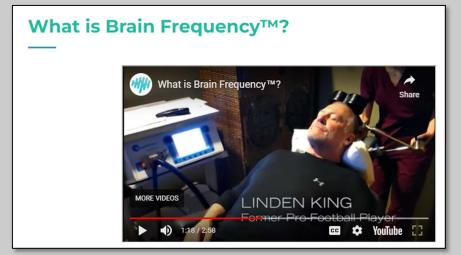
Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

https://brainfrequency.ai/affiliate-program

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

https://brainfrequency.ai/provider-faqs-1



https://brainfrequency.ai/overview



MagPro X100 Product Information Sheet, 03/23/2023.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



<u>US 8,465,408 Claim 1</u> <u>Infringing Activity</u>

MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

move an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field, Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field.

move a Q-factor of the intrinsic frequency

US 8,465,408 Claim 1

toward a target Qfactor of the intrinsic frequency using the magnetic field,

move a coherence value of intrinsic frequencies among multiple sites in a brain of the subject within a specified EEG band toward a target coherence value using the magnetic field wherein if the coherence value is higher than the target coherence value, applying at least two asynchronous magnetic fields close to the head of the subject, and wherein if the coherence value is lower than the target coherence value, applying at least one synchronized magnetic field close to the head of the subject; and

move an EEG phase between two sites in the brain of a subject of a specified EEG frequency toward a target EEG phase of the specified EEG frequency using the magnetic field wherein the magnetic field comprises one or more magnetic field generators that are of the same frequency

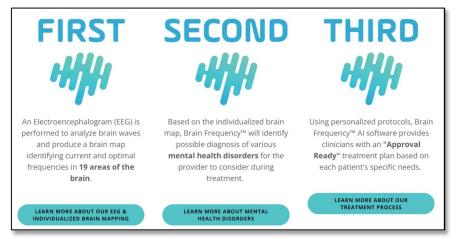
Infringing Activity

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1



https://brainfrequency.ai/why-are-we-different%3F-1

US 8,465,408 Claim 1

and are in-phase with each other, of the same frequency and out of phase with each other, or a combination thereof; and

Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

Wide awake. This is generally the mental state most people are in during the day and
most of their waking lives. Usually, this state in itself is uneventful, but don't
underestimate its importance. Many people lack sufficient beta activity, which can
cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR
production (a sub-range of beta at 12-15hz) which may be related to insomnia.
 Stimulating beta activity can improve emotional stability, energy levels, attentiveness
and concentration.

ALPHA (8 hz - 12 hz):

Awake but relaxed and not processing much information. When you get up in the
morning and just before sleep, you are naturally in this state. When you close your
eyes your brain automatically starts producing more alpha waves. Many studies
monitoring the EEG activity of experienced meditators have revealed strong increases
in alpha activity. Alpha activity has also been connected to the ability to recall
memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

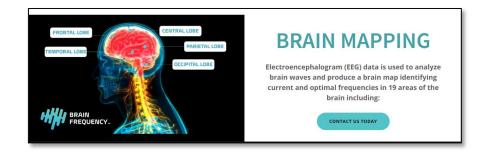
You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs



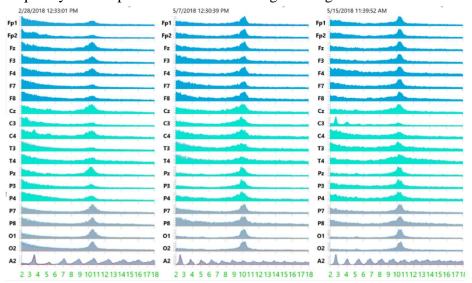
https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd

In a podcast, Brain Frequency founder and member Shannon Malish further confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 16:36-16:45, "if someone had very high anxiety, you would see those neurons really dialed up outside of the alpha state"; 20:47-20:57, "it [your brain] knows that that exact magnetic frequency and so it will grab onto it and it holds"; and 21:55-22:05, "we're going to take the number of where it [your brain] operates well and then we're going to use the magnet and set the magnet in areas of where your brain doesn't operate well") (available at https://gladdenlongevitypodcast.com/episodes, and https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fixyour-brain-once-and-for-all and https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34f adb30054a80)

US 8,465,408 Claim 1

Infringing Activity

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

(b) applying said magnetic field close to the head of the subject.

Information appearing on Brain Frequency's website, on customer websites using the Brain Frequency technology, and on the TMS manufacturer website/product sheets confirm applying said magnetic field close to the head of the subject.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

https://brainfrequency.ai/patient-faqs

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

https://brainfrequency.ai/patient-faqs

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability.

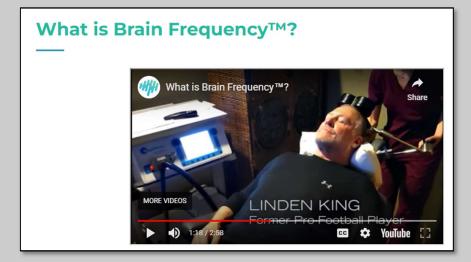
Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

https://brainfrequency.ai/affiliate-program

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

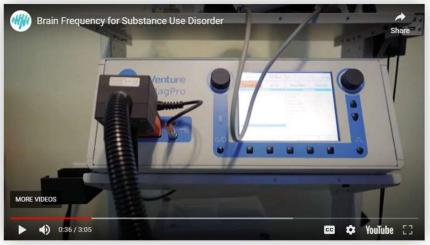
https://brainfrequency.ai/provider-faqs-1



https://brainfrequency.ai/overview



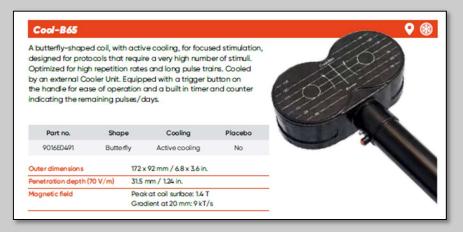
MagPro X100 Product Information Sheet, 03/23/2023.



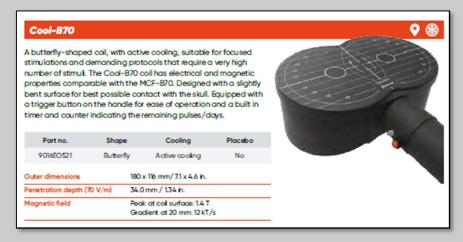
"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

US 8,465,408 Claim 1 **Infringing Activity** Customer websites confirm use of the Brain Frequency technology. See screenshots, supra, from: https://gladdenlongevity.com/programs/ https://www.liveinalignment.org/brainfrequency https://energy4lifecenters.com/brain-health/ https://thebiomedcenter.com/ Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same

result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

<u>US 8,465,408 Claim 2</u>

A method of treating Parkinson's disease, treating coma, treating post traumatic stress disorder (PTSD), treating amblyopia, and/or enhancing cognitive performance in a subject, comprising

Infringing Activity

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method for treating PTSD in a subject according to claim 2.

US 8,465,408 Claim 2 Infr

Infringing Activity

BRAIN HEALTH & WELLNESS

MENTAL HEALTH DISORDERS

- Trauma & Stressor-Related
- Impulse Control & Conduct
- Schizophrenia & Psychotic
- Obsessive-Compulsive
- Substance & Addictive
- Neurodevelopmental
- Somatic Symptom
- Feeding & Eating
- Neurocognitive
- **Dissociative**
- Sleep-Wake
- Personality
- Depressive
- Anxiety
- Bipolar
- ADHD
- PTSD

https://brainfrequency.ai/overview

| Patient: "Jason" Valid Psychometric Assessments Subjective | | | |
|--|------------|------------|------------|
| Assessments | 02/09/2022 | 02/22/2022 | 03/09/2022 |
| Executive Functioning Scale | 43 | 31 | 11 |
| Anxiety | 20 | 14 | 6 |
| Depression | 38 | 38 | 12 |
| Brain Body Connection | 29 | 15 | 8 |
| Sleep | 17 | 6 | 0 |
| Post Trauma | 58 | 22 | 6 |
| Concussion Symptoms | 65 | 47 | 33 |
| Cravings | 4 | 0 | 0 |
| Obsessive Thoughts & Behaviors | 37 | 23 | 11 |
| * Higher number represents more severe symptoms | | | |
| SEVERE MILD NORMAL | | | |

https://brainfrequency.ai/overview

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

moving at least one of: an intrinsic frequency of a brain of the subject within a specified EEG band toward a pre-selected intrinsic frequency Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms moving an intrinsic frequency within a specified EEG band of the subject toward a target intrinsic frequency within the specified EEG band by applying a magnetic field close to a head of the subject.

US 8,465,408 Claim 2

within the same specified EEG band and a Q-factor of the intrinsic frequency toward a target Qfactor of the intrinsic frequency, by applying a magnetic field close to a head of the subject,

Infringing Activity

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1

An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain

map, Brain Frequency™ will identify possible diagnosis of various mental health disorders for the provider to consider during treatment.

Based on the individualized brain

Frequency™ AI software provides clinicians with an "Approval Ready" treatment plan based on each patient's specific needs.

Using personalized protocols. Brain

LEARN MORE ABOUT OUR EEG &
INDIVIDUALIZED BRAIN MAPPING

LEARN MORE ABOUT MENTAL HEALTH DISORDERS TREATMENT PROCESS

https://brainfrequency.ai/why-are-we-different%3F-1

US 8,465,408 Claim 2 In

Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

Wide awake. This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

Awake but relaxed and not processing much information. When you get up in the
morning and just before sleep, you are naturally in this state. When you close your
eyes your brain automatically starts producing more alpha waves. Many studies
monitoring the EEG activity of experienced meditators have revealed strong increases
in alpha activity. Alpha activity has also been connected to the ability to recall
memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

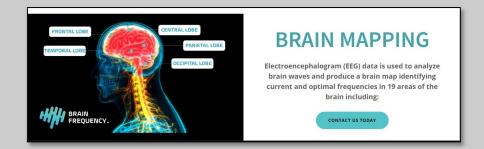
You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

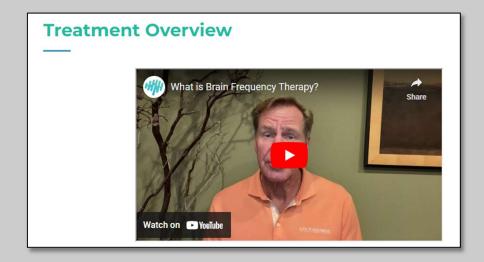
How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs



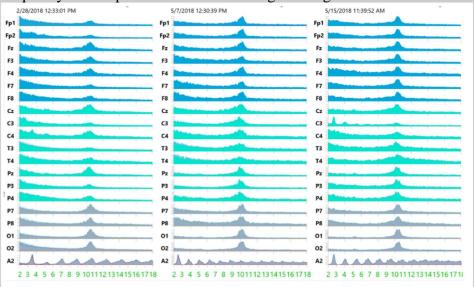
 $\frac{https://brainfrequency.ai/why-are-we-different\%\,3F-1\#c8ee53a4-5885-4b67-9b4c-1f504d8f9653$



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd

In a podcast, Brain Frequency founder and member Shannon Malish further confirms moving at least one of: an intrinsic frequency of a brain of the subject within a specified EEG band toward a pre-selected intrinsic frequency within the same specified EEG band and a Q-factor of the intrinsic frequency toward a target Q-factor of the intrinsic frequency, by applying a magnetic field close to a head of the subject.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 16:36-16:45, "if someone had very high anxiety, you would see those neurons really dialed up outside of the alpha state"; 20:47-20:57, "it [your brain] knows that that exact magnetic frequency and so it will grab onto it and it holds"; and 21:55-22:05, "we're going to take the number of where it [your brain] operates well and then we're going to use the magnet and set the magnet in areas of where your brain doesn't operate well") (available at https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fix-your-brain-once-and-for-all and

Infringing Activity

https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34f adb30054a80)

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

wherein the magnetic field comprises at least one of(a) a single target frequency within the specified EEG band; (b) a plurality of frequencies within the specified EEG band; and (c) the intrinsic frequency of the brain of the subject within the specified EEG band.

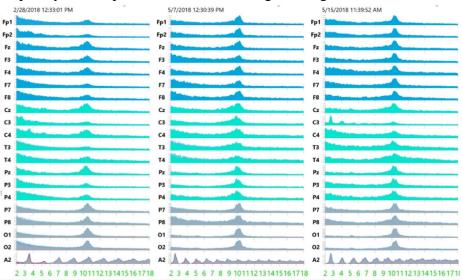
Information appearing on Brain Frequency's website confirms the magnetic field comprises at least one of(a) a single target frequency within the specified EEG band; (b) a plurality of frequencies within the specified EEG band; and (c) the intrinsic frequency of the brain of the subject within the specified EEG band.



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd

In a podcast, Brain Frequency founder and member Shannon Malish further confirms the magnetic field comprises at least one of(a) a single target frequency within the specified EEG band; (b) a plurality of frequencies within the specified EEG band; and (c) the intrinsic frequency of the brain of the subject within the specified EEG band.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 16:36-16:45, "if someone had very high anxiety, you would see those neurons really dialed up outside of the alpha state"; 20:47-20:57, "it [your brain] knows that that exact magnetic frequency and so it will grab onto it and it holds"; and 21:55-22:05, "we're going to take the number of where it [your brain] operates well and then we're going to use the magnet and set the magnet in areas of where your brain doesn't operate well") (available at https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fix-your-brain-once-and-for-all and

https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34f adb30054a80)

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https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

| <u>US 8,465,408 Claim 3</u> | Infringing Activity |
|-----------------------------|--|
| The method of claim 1 | The evidence appearing on Brain Frequency's website |
| or 2, further | (brainfrequency.ai) and on customer websites regarding using the Brain |
| comprising the step of | Frequency technology confirms that Defendant induces the infringing |
| measuring EEG data | use by customers of a method for treating PTSD in a subject according to |
| of the subject after the | claim 3. |
| applying step. | |
| | Information appearing on Brain Frequency's website confirms the step of |
| | measuring EEG data of the subject after the applying step. |

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1



An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various mental health disorders for the provider to consider during treatment.

Using personalized protocols, Brain Frequency™ AI software provides clinicians with an "Approval Ready" treatment plan based on each patient's specific needs.

LEARN MORE ABOUT OUR EEG &
INDIVIDUALIZED BRAIN MAPPING

LEARN MORE ABOUT MENTAL HEALTH DISORDERS TREATMENT PROCESS

https://brainfrequency.ai/why-are-we-different%3F-1

Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

Wide awake. This is generally the mental state most people are in during the day and
most of their waking lives. Usually, this state in itself is uneventful, but don't
underestimate its importance. Many people lack sufficient beta activity, which can
cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR
production (a sub-range of beta at 12-15hz) which may be related to insomnia.
 Stimulating beta activity can improve emotional stability, energy levels, attentiveness
and concentration.

ALPHA (8 hz - 12 hz):

Awake but relaxed and not processing much information. When you get up in the
morning and just before sleep, you are naturally in this state. When you close your
eyes your brain automatically starts producing more alpha waves. Many studies
monitoring the EEG activity of experienced meditators have revealed strong increases
in alpha activity. Alpha activity has also been connected to the ability to recall
memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 8,465,408 Claim 4

Infringing Activity

The method of claim 1 or 2, further comprising the steps of: adjusting frequency of said magnetic field based on the EEG data of the subject; and repeating the applying step with an adjusted frequency.

The evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method for treating PTSD in a subject according to claim 4.

Information appearing on Brain Frequency's website confirms adjusting frequency of said magnetic field based on the EEG data of the subject; and repeating the applying step with an adjusted frequency.

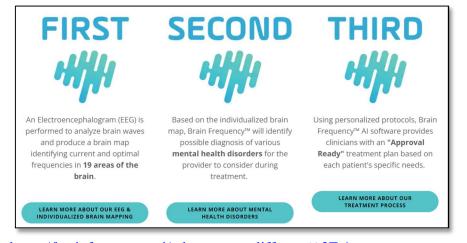
Infringing Activity

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Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1



https://brainfrequency.ai/why-are-we-different%3F-1

Infringing Activity

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Wide awake. This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

Awake but relaxed and not processing much information. When you get up in the
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in alpha activity. Alpha activity has also been connected to the ability to recall
memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

| <u>US 8,465,408 Claim 9</u> | Infringing Activity |
|-----------------------------|--|
| The method of claim 1 | The evidence appearing on Brain Frequency's website |
| or 2, wherein the step | (brainfrequency.ai) and on customer websites regarding using the Brain |
| of applying the | Frequency technology confirms that Defendant induces the infringing |
| magnetic field is for | use by customers of a method for treating PTSD in a subject according to |
| about 5 minutes to | claim 9. |
| about two hours. | |
| | Information appearing on Brain Frequency's website confirms applying |
| | the magnetic field is for about 5 minutes to about two hours. |
| | |

Infringing Activity

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review;
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 8,465,408 Claim 10

Infringing Activity

The method of claim 1 or 2, further comprising repeating the applying step after an interval about 6 hours to about 14 days.

The evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method for treating PTSD in a subject according to claim 10.

Information appearing on Brain Frequency's website confirms repeating the applying step after an interval about 6 hours to about 14 days.

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10;
 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 8,465,408 Claim 12

12. A device for use in treating Parkinson's disease, treating coma, treating post traumatic stress disorder (PTSD), treating amblyopia, and/or enhancing cognitive performance in a

subject, comprising:

Infringing Activity

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant makes, provides, sells, and induces the infringing use by customers of a device for use in treating PTSD in a subject according to claim 12.

BRAIN HEALTH & WELLNESS

MENTAL HEALTH DISORDERS

- Trauma & Stressor-Related
- Impulse Control & Conduct
- Schizophrenia & Psychotic
- Obsessive-Compulsive
- Substance & Addictive
- Neurodevelopmental
- Somatic Symptom
- Feeding & Eating
- Neurocognitive
- **Dissociative**
- Sleep-Wake
- Personality
- <u>Depressive</u>
- Anxiety
- Bipolar
- ADHD
- PTSD

https://brainfrequency.ai/overview

| <u>US 8,465,408 Claim 12</u> | <u>Infringing Activity</u> | | | | | |
|------------------------------|--|------------|------------|------------|--|--|
| | Patient: "Jason" Valid Psychometric Assessments Subjective | | | | | |
| | Assessments | 02/09/2022 | 02/22/2022 | 03/09/2022 | | |
| | Executive Functioning Scale | 43 | 31 | 11 | | |
| | Anxiety | 20 | 14 | 6 | | |
| | Depression | 38 | 38 | 12 | | |
| | Brain Body Connection | 29 | 15 | 8 | | |
| | Sleep | 17 | 6 | 0 | | |
| | Post Trauma | 58 | 22 | 6 | | |

https://brainfrequency.ai/overview

Obsessive Thoughts & Behaviors

Concussion Symptoms

Cravings

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

NORMAL

* Higher number represents more severe symptoms

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

a means for applying a magnetic field to a head of a subject; whereby the means for applying the magnetic field comprises: a first processor that controls Information appearing on Brain Frequency's website, customer websites, and the TMS manufacturer website/product sheets confirm a first processor that controls the application of the magnetic field.

Infringing Activity

the application of the magnetic field and

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

https://brainfrequency.ai/patient-faqs

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers , spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

https://brainfrequency.ai/patient-faqs

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability.

Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

https://brainfrequency.ai/affiliate-program

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

https://brainfrequency.ai/provider-faqs-1



https://brainfrequency.ai/overview



MagPro X100 Product Information Sheet, 03/23/2023.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

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wherein the first processor or a second processor moves at least one of: Information appearing on Brain Frequency's website confirms an intrinsic frequency of a brain of the subject in a specified EEG band to a target intrinsic frequency within the specified EEG band using the magnetic field.

(a) an intrinsic frequency of a brain of the subject in a specified EEG band to a target intrinsic frequency within the specified EEG band

using the magnetic field;

- (b) a Q-factor of an intrinsic frequency of the brain of the subject within a specified EEG band to a target Qfactor of the intrinsic frequency using the magnetic field;
- (c) a coherence value of intrinsic frequencies among multiple sites in the brain of the subject within a specified EEG band using the magnetic field wherein if the coherence value is higher than a preselected coherence value, applying at least two asynchronous magnetic fields close to the head of the subject, and wherein if the coherence value is lower than the preselected coherence value, applying at least one synchronized magnetic field close to the head of the subject; and
- (d) an EEG phase between two sites in the brain of the subject of a specified EEG frequency using the magnetic field wherein the magnetic field comprises a first magnetic field that is

Infringing Activity

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1

FIRST SECOND

An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map

identifying current and optimal frequencies in 19 areas of the brain

LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING

provider to consider during treatment

Based on the individualized brain

map, Brain Frequency™ will identify

possible diagnosis of various

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LEARN MORE ABOUT MENTAL HEALTH DISORDERS

Using personalized protocols. Brain Frequency™ Al software provides clinicians with an "Approval Ready" treatment plan based on each patient's specific needs.

LEARN MORE ABOUT OUR
TREATMENT PROCESS

https://brainfrequency.ai/why-are-we-different%3F-1

in-phase with a second magnetic field or a first magnetic field that is out of phase with a second magnetic field.

Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

Wide awake. This is generally the mental state most people are in during the day and
most of their waking lives. Usually, this state in itself is uneventful, but don't
underestimate its importance. Many people lack sufficient beta activity, which can
cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR
production (a sub-range of beta at 12-15hz) which may be related to insomnia.
 Stimulating beta activity can improve emotional stability, energy levels, attentiveness
and concentration.

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Awake but relaxed and not processing much information. When you get up in the
morning and just before sleep, you are naturally in this state. When you close your
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monitoring the EEG activity of experienced meditators have revealed strong increases
in alpha activity. Alpha activity has also been connected to the ability to recall
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https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

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- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

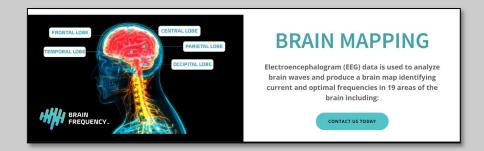
You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

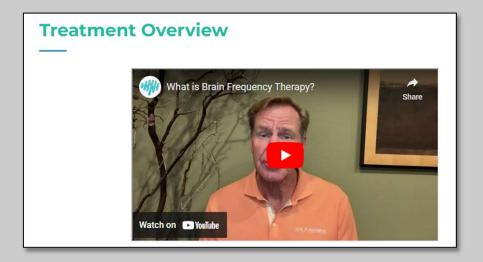
How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs



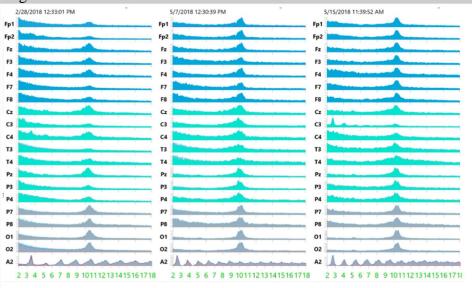
 $\frac{https://brainfrequency.ai/why-are-we-different\%\,3F-1\#c8ee53a4-5885-4b67-9b4c-1f504d8f9653$



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

The Brain Frequency Center website confirms that the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.



https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd

In a podcast, Brain Frequency founder and member Shannon Malish further confirms that the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 16:36-16:45, "if someone had very high anxiety, you would see those neurons really dialed up outside of the alpha state"; 20:47-20:57, "it [your brain] knows that that exact magnetic frequency and so it will grab onto it and it holds"; and 21:55-22:05, "we're going to take the number of where it [your brain] operates well and then we're going to use the magnet and set the magnet in areas of where your brain doesn't operate well") (available at https://gladdenlongevitypodcast.com/episodes, and https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fixyour-brain-once-and-for-all and https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34f adb30054a80)

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

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US 8,465,408 Claim 20

Infringing Activity

The device of claim 12, further comprising logic that calculates information from EEG data collected from the subject within a specified EEG band, wherein said information comprises at least one of items listed below: (a) the intrinsic frequency; (b) the Q-factor of the intrinsic frequency; (c) the coherence value of intrinsic frequencies; (d) the EEG phase; and (e) any combination thereof.

Defendant makes, provides, sells, and induces the infringing use by customers of a device for use in treating PTSD in a subject according to claim 20.

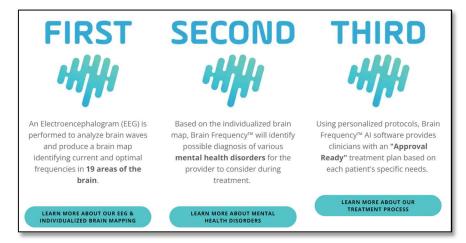
Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms logic that calculates information from EEG data collected from the subject within a specified EEG band, wherein said information comprises at least one of items listed below: (a) the intrinsic frequency; (b) the Q-factor of the intrinsic frequency; (c) the coherence value of intrinsic frequencies; (d) the EEG phase; and (e) any combination thereof.

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1



https://brainfrequency.ai/why-are-we-different%3F-1

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memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

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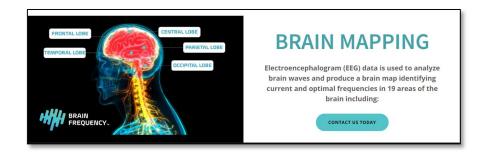
You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs



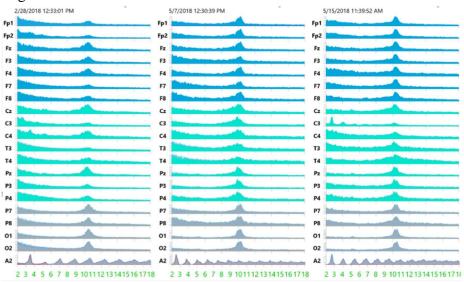
https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

The Brain Frequency Center website confirms that the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.



https://brainfrequency center.com/case-studies/morgan-34-year-old-lawyer-with-ptsd

In a podcast, Brain Frequency founder and member Shannon Malish further confirms logic that calculates information from EEG data collected from the subject within a specified EEG band, wherein said information comprises the intrinsic frequency.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 16:36-16:45, "if someone had very high anxiety, you would see those neurons really dialed up outside of the alpha state"; 20:47-20:57, "it [your brain] knows that that exact magnetic frequency and so it will grab onto it and it holds"; and 21:55-22:05, "we're going to take the number of where it [your brain] operates well and then we're going to use the magnet and set the magnet in areas of where your brain doesn't operate well") (available at https://gladdenlongevitypodcast.com/episodes, and https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fixyour-brain-once-and-for-all and https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34f adb30054a80)

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

EXHIBIT D

US 8,870,737

<u>US 8,870,737, Claim 1</u>

Infringing Activity

A method comprising:

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method according to claim 1.⁴

How do I know if I can integrate Brain Frequency™ into my clinic?

Since Brain Frequency™ is able to treat a wide array of mental health, neurological disorders, and cognitive functioning, we've separated our abilities into two distinct practices. One is for mental health and medical practitioners to treat DSM-5 diagnosable issues like depression, bipolar disorder, concussions, and the like. The other is for functional medicine and wellness, used to treat things like general sleep issues, mental fog, trouble with short term memory, tinnitus, etc. You can see more about this distinction on the Affiliate Program page.

https://brainfrequency.ai/provider-faqs-1

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

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⁴ The Brain Frequency website lists "locations" in four states: Gladden Longevity in Texas (https://www.gladdenlongevity.com/, Live In Alignment in California (https://www.liveinalignment.org/), BioMed Scottsdale in Arizona (https://thebiomedcenter.com/), and Energy4Life Centers in Utah (https://energy4lifecenters.com/).

US 8,870,737, Claim 1

Case 5:23-cv-00626-XR

Infringing Activity

(a) adjusting output of a magnetic field;

Information appearing on Brain Frequency's website, on the TMS manufacturer website/product sheets, and on customer websites confirm adjusting output of a magnetic field.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

https://brainfrequency.ai/patient-faqs

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

https://brainfrequency.ai/patient-faqs

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability.

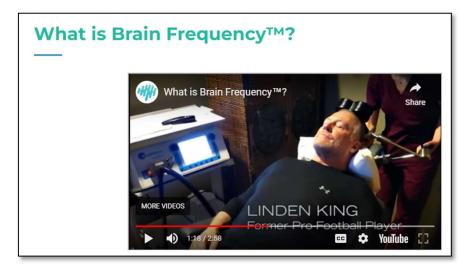
Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

https://brainfrequency.ai/affiliate-program

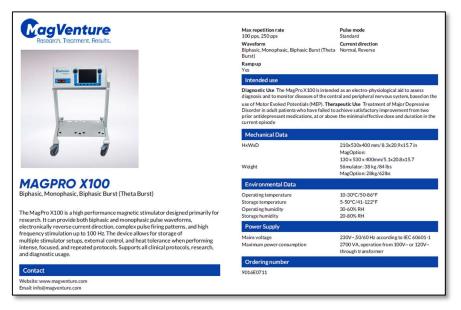
Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

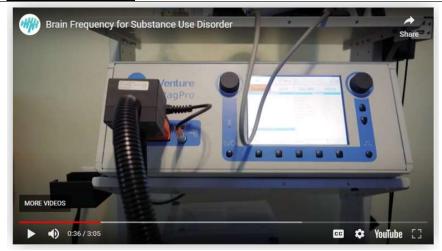
https://brainfrequency.ai/provider-faqs-1



https://brainfrequency.ai/overview



MagPro X100 Product Information Sheet, 03/23/2023.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

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https://www.liveinalignment.org/brainfrequency

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(b) applying said magnetic field close to a head of a subject; and

Information appearing on Brain Frequency's website, on the TMS manufacturer website/product sheets, and on customer websites confirm applying said magnetic field close to a head of a subject.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

https://brainfrequency.ai/patient-faqs

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers , spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

https://brainfrequency.ai/patient-faqs

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Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability.

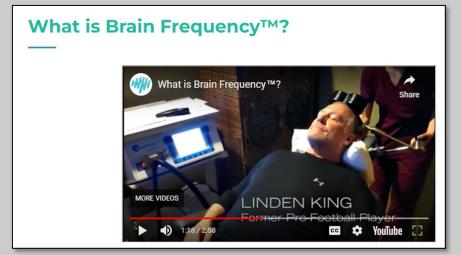
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https://brainfrequency.ai/affiliate-program

Is the equipment safe?

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https://brainfrequency.ai/provider-faqs-1



https://brainfrequency.ai/overview



MagPro X100 Product Information Sheet, 03/23/2023.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: https://www.youtube.com/watch?v=ZT4CgJxgb5c.



MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

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(c) moving, using the magnetic field, at least one of an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band and a Q-factor of an intrinsic frequency

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms moving, using the magnetic field, an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band;

US 8,870,737, Claim 1

within a specified EEG band of the subject toward a pre-selected Q-factor,

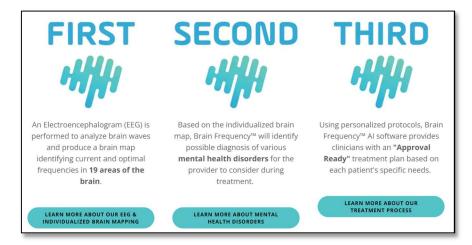
Infringing Activity

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1



https://brainfrequency.ai/why-are-we-different%3F-1

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

. Wide awake. This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

. Awake but relaxed and not processing much information. When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

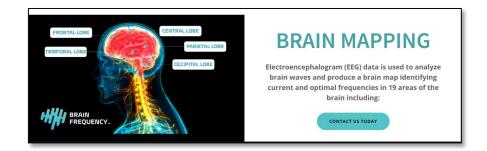
You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs



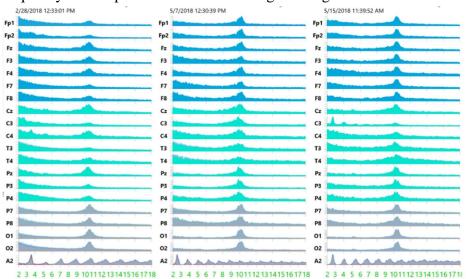
https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



https://brainfrequencycenter.com/case-studies/morgan-34-year-oldlawyer-with-ptsd

In a podcast, Brain Frequency founder and member Shannon Malish further confirms moving, using the magnetic field, an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 16:36-16:45, "if someone had very high anxiety, you would see those neurons really dialed up outside of the alpha state"; 20:47-20:57, "it [your brain] knows that that exact magnetic frequency and so it will grab onto it and it holds"; and 21:55-22:05, "we're going to take the number of where it [your brain] operates well and then we're going to use the magnet and set the magnet in areas of where your brain doesn't operate well") (available at https://gladdenlongevitypodcast.com/episodes, and https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fixyour-brain-once-and-for-all and https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34f adb30054a80)

US 8,870,737, Claim 1

Infringing Activity

Customer websites confirm use of the Brain Frequency technology. See screenshots, supra, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

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wherein the preselected intrinsic frequency is a frequency that increases blood flow in the cortex of the subject, and wherein the pre-selected Qfactor is a Q-factor that increases blood flow in the cortex of the subject.

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms the pre-selected intrinsic frequency is a frequency that increases blood flow in the cortex of the subject, and wherein the pre-selected Q-factor is a Q-factor that increases blood flow in the cortex of the subject.



https://brainfrequency.ai/overview



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

In a podcast, Brain Frequency founder and member Shannon Malish further confirms a magnetic field increases blood flow of a cortex of the brain or decreases the blood flow of a lower region of the brain.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 21:22 – 22:37 "so the EEG tells us how your brain functions well...and so we use that actual number of how your brain operates in the treatment plan to deliver magnetic stimulation"; 22:10-22:23"your brain functions, remember, back to front so that's the way we are treating you...we are going to treat you from back to front and your neurons start to pick up that pattern because it recognizes it") (available at

https://gladdenlongevitypodcast.com/episodes, and https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fixyour-brain-once-and-for-all and https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34f adb30054a80)

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<u>US 8,870,737, Claim 2</u>

Infringing Activity

A method comprising:

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method according to claim 2.

How do I know if I can integrate Brain Frequency™ into my clinic?

Since Brain Frequency™ is able to treat a wide array of mental health, neurological disorders, and cognitive functioning, we've separated our abilities into two distinct practices. One is for mental health and medical practitioners to treat DSM-5 diagnosable issues like depression, bipolar disorder, concussions, and the like. The other is for functional medicine and wellness, used to treat things like general sleep issues, mental fog, trouble with short term memory, tinnitus, etc. You can see more about this distinction on the Affiliate Program page.

https://brainfrequency.ai/provider-faqs-1

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(a) adjusting output of a magnetic field;

Information appearing on Brain Frequency's website, on the TMS manufacturer website/product sheets, and on customer websites confirm adjusting output of a magnetic field.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

https://brainfrequency.ai/patient-faqs

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

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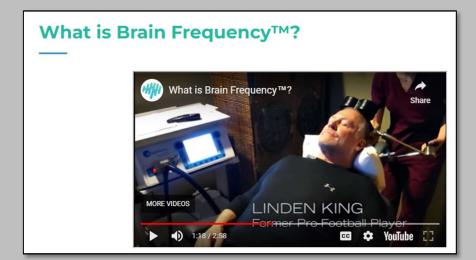
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https://brainfrequency.ai/affiliate-program

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

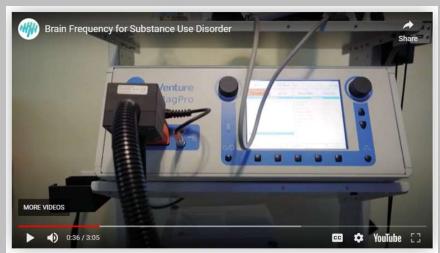
https://brainfrequency.ai/provider-faqs-1



https://brainfrequency.ai/overview



MagPro X100 Product Information Sheet, 03/23/2023.



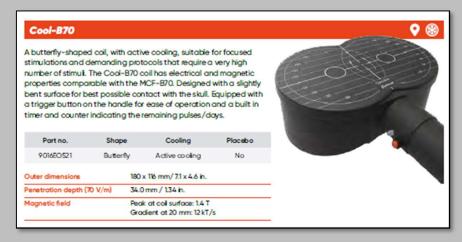
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MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

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(b) applying said magnetic field close to a head of a subject; and

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Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

https://brainfrequency.ai/patient-fags

Are there any risks?

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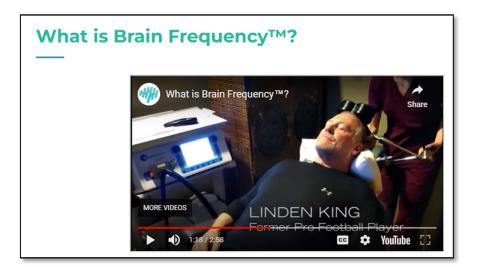
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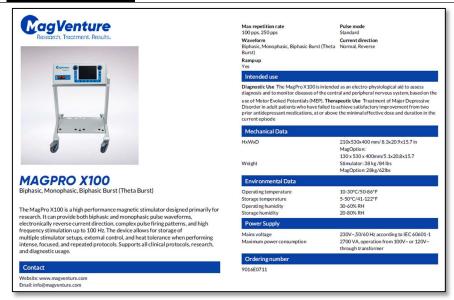
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https://brainfrequency.ai/provider-faqs-1



https://brainfrequency.ai/overview



MagPro X100 Product Information Sheet, 03/23/2023.



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MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

US 8,870,737, Claim 2

Infringing Activity

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(c) moving, using the magnetic field, an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band,

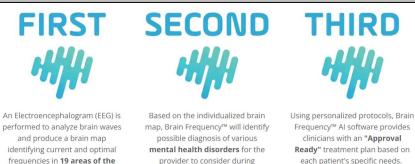
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CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1



LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING

brain.

LEARN MORE ABOUT MENTAL HEALTH DISORDERS

treatment.

Frequency™ Al software provides Ready" treatment plan based on each patient's specific needs.

https://brainfrequency.ai/why-are-we-different%3F-1

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

• Wide awake. This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

• Awake but relaxed and not processing much information. When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10;
 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

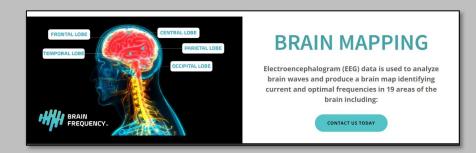
You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs



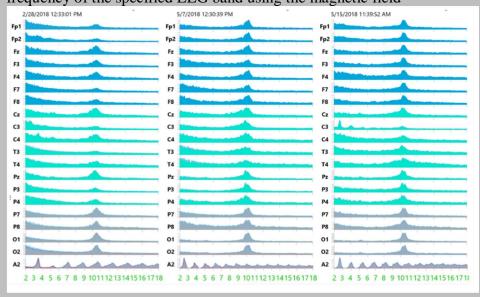
https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd

In a podcast, Brain Frequency founder and member Shannon Malish further confirms moving, using the magnetic field, an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 16:36-16:45, "if someone had very high anxiety, you would see those neurons really dialed up outside of the alpha state"; 20:47-20:57, "it [your brain] knows that that exact magnetic frequency and so it will grab onto it and it holds"; and 21:55-22:05, "we're going to take the number of where it [your brain] operates well and then we're going to use the magnet and set the magnet in areas of where your brain doesn't operate well") (available at https://gladdenlongevitypodcast.com/episodes, and https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fixyour-brain-once-and-for-all and https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34f adb30054a80)

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.live in a lignment.org/brain frequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

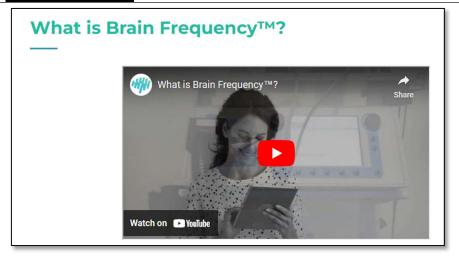
Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

wherein the preselected intrinsic frequency is a frequency that decreases blood flow in Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms the pre-selected intrinsic frequency is a frequency that decreases blood flow in a lower region of the brain of the subject.

US 8,870,737, Claim 2

Infringing Activity

a lower region of the brain of the subject.



https://brainfrequency.ai/overview



"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

In a podcast, Brain Frequency founder and member Shannon Malish further confirms a magnetic field increases blood flow of a cortex of the brain or decreases the blood flow of a lower region of the brain.

See, e.g., Gladden Longevity Podcast, Nov. 2022, "Is this how you fix your brain once and for all?" (in which Ms. Malish explains the treatment of patients using Brain Frequency's techniques, see e.g., 13:01-13:10, "what areas of their brain are firing, and which ones are over-firing,

under-firing, or not firing at all"; 14:49-15:05, "so when their brain is firing, how is it firing, what is their frequency, what is their basic chemical electrical signature of where their brain operates well, and let's see where it doesn't operate well"; 21:22 – 22:37 "so the EEG tells us how your brain functions well...and so we use that actual number of how your brain operates in the treatment plan to deliver magnetic stimulation"; 22:10-22:23"your brain functions, remember, back to front so that's the way we are treating you...we are going to treat you from back to front and your neurons start to pick up that pattern because it recognizes it") (available at

https://gladdenlongevitypodcast.com/episodes, and

https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fixyour-brain-once-and-for-all and

https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34f adb30054a80)

Customer websites confirm use of the Brain Frequency technology. See screenshots, supra, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

| <u>US 8,870,737 Claim 3</u> | Infringing Activity |
|-----------------------------|---|
| The method of any of | The evidence appearing on Brain Frequency's website |
| claims 1 and 2, further | (brainfrequency.ai) and on customer websites regarding using the Brain |
| comprising taking | Frequency technology confirms that Defendant induces the infringing |
| EEG measurements of | use by customers of a method according to claim 3. |
| the subject before the | |
| adjusting step or after | Information appearing on Brain Frequency's website confirms taking |
| the applying step, or | EEG measurements of the subject before the adjusting step or after the |
| both before the | applying step, or both before the adjusting step and after the applying |
| | step. |

<u>US 8,870,737 Claim 3</u> adjusting step and after the applying step.

Infringing Activity

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1



An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various mental health disorders for the provider to consider during treatment.

Using personalized protocols, Brain Frequency™ AI software provides clinicians with an "Approval Ready" treatment plan based on each patient's specific needs.

LEARN MORE ABOUT OUR EEG & LEARN MORE ABOUT MENTAL HEALTH DISORDERS

https://brainfrequency.ai/why-are-we-different%3F-1

US 8,870,737 Claim 3

Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

. Wide awake. This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

. Awake but relaxed and not processing much information. When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
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- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs

Customer websites confirm use of the Brain Frequency technology. See screenshots, supra, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 8,870,737 Claim 4

Infringing Activity

The method of any of claims 1 and 2, further comprising determining at least one of: the subject's intrinsic frequency of the specified EEG band and the subject's **Q-factor of an intrinsic** frequency within a specified EEG band.

The evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method according to claim 4.

Information appearing on Brain Frequency's website confirms determining at least one of: the subject's intrinsic frequency of the specified EEG band and the subject's Q-factor of an intrinsic frequency within a specified EEG band.

US 8,870,737 Claim 4

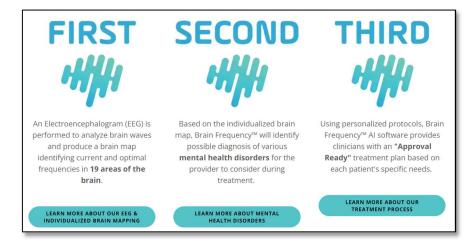
Infringing Activity

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

https://brainfrequency.ai/why-are-we-different%3F-1



https://brainfrequency.ai/why-are-we-different%3F-1

US 8,870,737 Claim 4

Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

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https://brainfrequency.ai/eeg-%26-assessments

What does the treatment process look like?

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- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

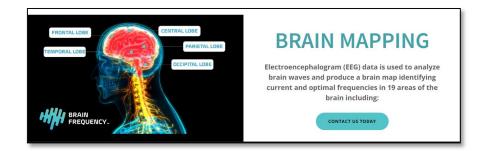
You will complete this same process for each set of treatments.

https://brainfrequency.ai/patient-faqs

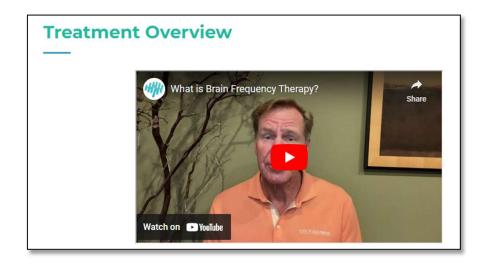
How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

https://brainfrequency.ai/patient-faqs



https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653



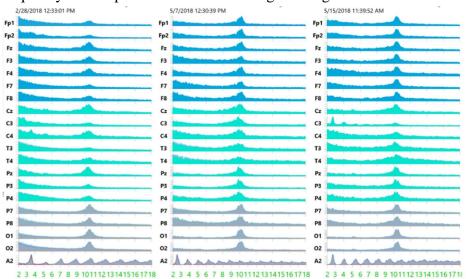
"The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain with an individual target frequency at each therapy session."

"Treatment Process – Brain FrequencyTM" video, https://brainfrequency.ai/treatment-process

US 8,870,737 Claim 4

Infringing Activity

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



https://brainfrequencycenter.com/case-studies/morgan-34-year-oldlawyer-with-ptsd

Customer websites confirm use of the Brain Frequency technology. See screenshots, supra, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

| <u>US 8,870,737 Claim 8</u> | Infringing Activity |
|-----------------------------|--|
| The method of any of | The evidence appearing on Brain Frequency's website |
| claims 1 and 2, | (brainfrequency.ai) and on customer websites regarding using the Brain |

Case 5:23-cv-00626-XR

US 8,870,737 Claim 8

wherein the step of applying the magnetic field is for about 5 minutes to about two hours.

Infringing Activity

Frequency technology confirms that Defendant induces the infringing use by customers of a method according to claim 8.

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms applying the magnetic field is for about 5 minutes to about two hours.

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- Treatments #2-#10: Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

Customer websites confirm use of the Brain Frequency technology. See screenshots, supra, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

US 8,870,737 Claim 9

Infringing Activity

The method of any of claims 1 and 2, further comprising repeating

The evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain

US 8,870,737 Claim 9

Case 5:23-cv-00626-XR

Infringing Activity

the applying step after an interval about 6 hours to about 14 days. Frequency technology confirms that Defendant induces the infringing use by customers of a method according to claim 9.

Information appearing on Brain Frequency's website confirms repeating the applying step after an interval about 6 hours to about 14 days.

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- Intake Appointment: Initial EEG, questionnaire, assessments, and review; about one hour.
- Treatment #1: Details on the treatment process, Q&A; about 45 min.
- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- Follow-Up EEG: Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

Customer websites confirm use of the Brain Frequency technology. See screenshots, *supra*, from:

https://gladdenlongevity.com/programs/

https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/

https://thebiomedcenter.com/

Based on the foregoing, this claim element is literally satisfied by the Accused Product. If Defendant contends otherwise, any alleged differences between this element and the Accused Product would be insubstantial. The Accused Product performs substantially the same function, in substantially the same way, to yield substantially the same result. The Accused Product, therefore, would satisfy this element under the doctrine of equivalents. Plaintiff reserves the right to the address any alleged differences raised by Defendant if and when Defendant makes such allegations.

| <u>US 8,870,737 Claim 11</u> | |
|------------------------------|--|
| The method of any of | |
| claims 1 and 2, | |
| wherein the method | |
| decreases a HAMD | |

Infringing Activity

The evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method according to claim 11.

Infringing Activity

score of the subject as measured using a HAMD rating scale.

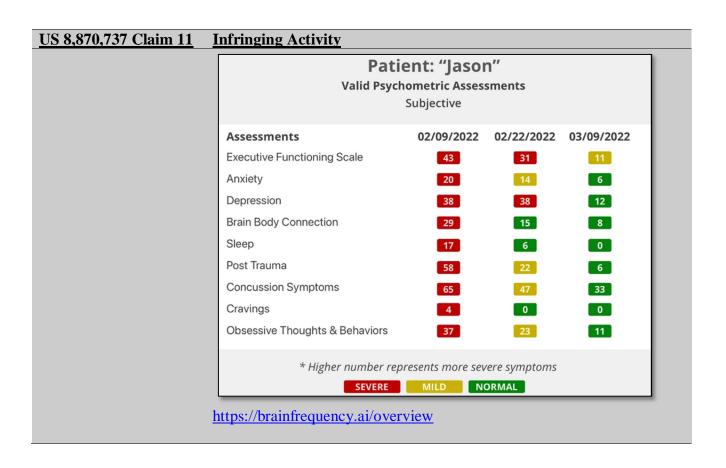
Information appearing on Brain Frequency's website confirms the method decreases a HAMD score of the subject as measured using a HAMD rating scale.

BRAIN HEALTH & WELLNESS

MENTAL HEALTH DISORDERS

- Trauma & Stressor-Related
- Impulse Control & Conduct
- Schizophrenia & Psychotic
- Obsessive-Compulsive
- Substance & Addictive
- Neurodevelopmental
- Somatic Symptom
- Feeding & Eating
- Neurocognitive
- Dissociative
- Sleep-Wake
- Personality
- <u>Depressive</u>
- Anxiety
- <u>Bipolar</u>
- ADHD
- PTSD

https://brainfrequency.ai/overview



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US 8,870,737 Claim 11 **Infringing Activity PSYCHOMETRIC ASSESSMENTS** Adverse Childhood Experience (ACE) Questionnaire (pdf) ± Download Autism Adult (pdf) ± Download Brief Substance Use Index (pdf) ± Download CARS Autism - Child (pdf) ± Download Center for Epidemiologic Studies Depression Scale (CES-D) (pdf) ± Download Cerebral Palsy (pdf) ± Download Dissociative Experiences Scales (DES) (pdf) ± Download Executive Functioning Checklist (pdf) ± Download Hamilton Anxiety Rating Scale (HAM-A) (pdf) ± Download Hamilton Test (HAM-D) (pdf) ≜ Download HIT-6™ Headache Impact Test (pdf) ± Download Mood Questionnaire (pdf) ± Download https://brainfrequency.ai/eeg-%26-assessments How will I track my progress? Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses. https://brainfrequency.ai/patient-faqs Customer websites confirm use of the Brain Frequency technology. See screenshots, supra, from: https://gladdenlongevity.com/programs/ https://www.liveinalignment.org/brainfrequency

https://energy4lifecenters.com/brain-health/https://thebiomedcenter.com/

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